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NABERS:

Lessons from 12 years of performance-based ratings in Australia

Presented by

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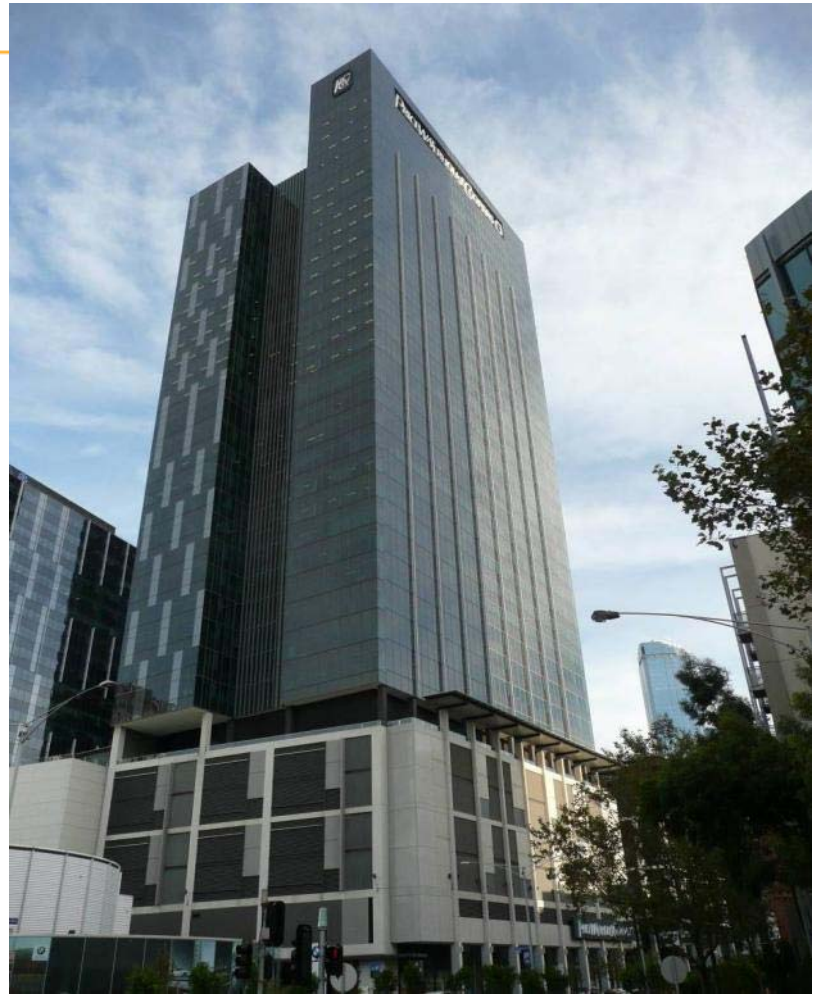
Overview

- Performance based ratings
- NABERS history
- NABERS structure
- Market impacts
- Lessons learnt
- Conclusions



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Performance based ratings

- Rating schemes are about communication
- Design-based ratings
  - LEED
  - BREEAM
  - Green Star
- Performance-based ratings
  - Energy Star
  - NABERS

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FAQ for performance ratings

- Measurement based on actual operational performance
  - Energy bills, hours, location -> rating
- Measure not just design effectiveness but also commissioning, operation/operability, and maintenance/maintainability
- Not directly rating design, just outcomes
- Good design ratings don’t always correlate with good performance ratings – and vice versa

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NABERS development history

- 1998 – NSW Government calls for tenders on development of a building rating scheme
- 1999 – Australian Building Greenhouse Rating scheme developed in response
- 2000 – significant modifications made for extension to Victoria, copied back to whole scheme
- 2000-2006 – Further adaptations for Western Australia, Queensland and Northern Territory

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NABERS development history

- 2006 – NABERS Water released
- 2008 – NABERS Energy and Water for Hotels Released
- 2009 – NABERS Energy and Water for Shopping Centres released
- 2009 – ABGR becomes NABERS Energy for Offices
- 2010 – NABERS becomes mandatory for sale or lease of offices above 2000m^2
- 2011 – NABERS scale extended to 6 stars
  - Needed to cope with leading edge buildings

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NABERS structural elements

- Common to all NABERS ratings
  - Based on operational performance derived from energy or water bills
  - Correction made for unavoidable external factors (hours, climate, and sometimes equipment density)
  - Scale 1-6 stars with half stars; 1 star poor, 2.5-3 stars average, 5 stars best practice, 6 stars 50% of 5 stars
  - Energy ratings calculated using greenhouse weightings on fuels
  - Accreditation and quality assurance requirements

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NABERS Energy for Offices

- The longest established and most popular rating
- Three rating types
  - Base building: HVAC, common area lighting, lifts, car parks
  - Tenancy: tenant light and power and supplementary HVAC
  - Whole building: base building + tenancy
- Base building rating corrects for climate and hours
- Tenancy rating corrects for hours and equipment density
- Whole building rating corrects for hours, climate and equipment density

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NABERS Water for Offices

- Essentially NABERS Energy with water bills
- Only on whole building basis
- Adjustments for climate and hours
- Strong empirical climate correction to median consumption
  - Melbourne – 0.7kl/m²
  - Sydney – 1.1kl/m²
  - Brisbane – 1.56kl/m²

.....due to cooling towers

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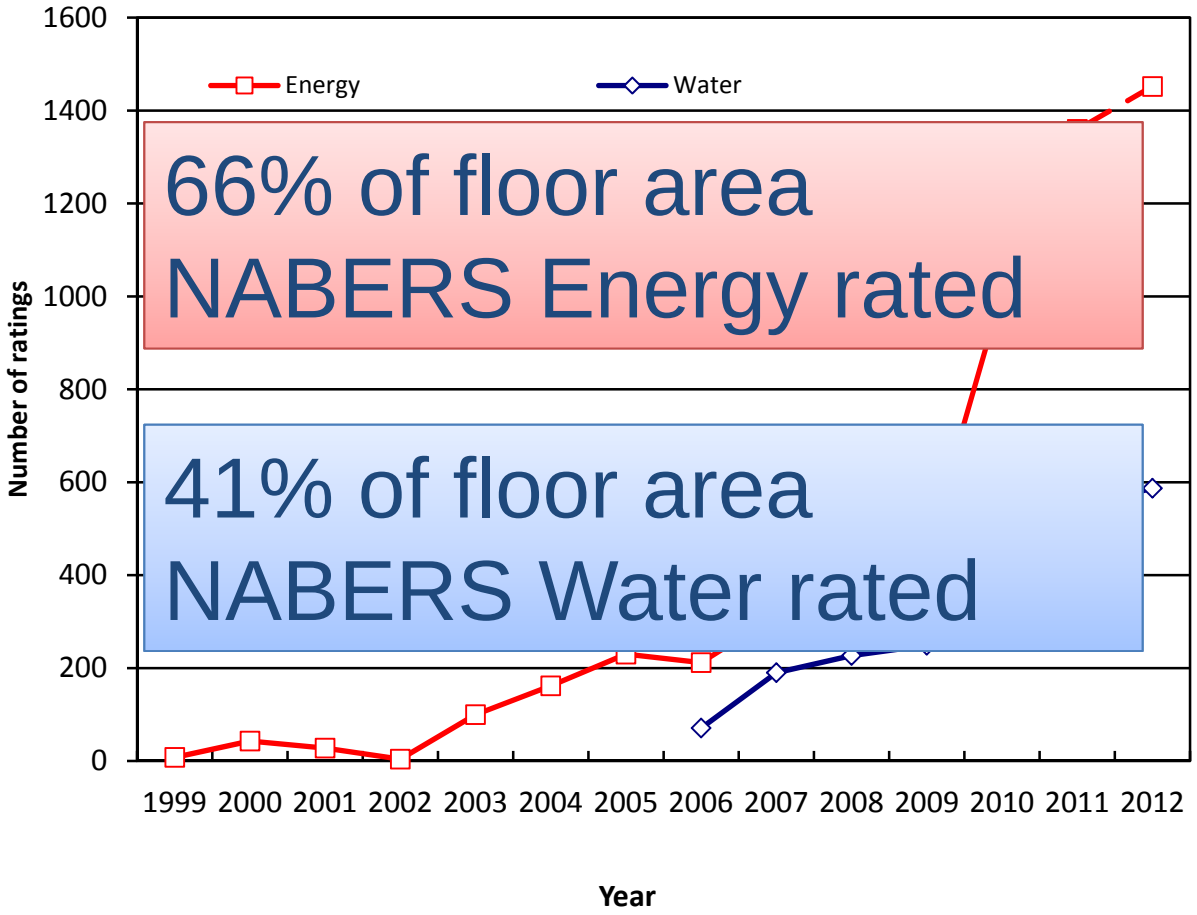
Market impacts - adoption



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Voluntary adoption drivers

- Base building/tenant split
  - Rating types enable tenants to rate independent of owners and vice versa
  - Enables base building rating to be a procurement requirement or advertised feature
- Government procurement policy for leases and new buildings
  - Set at 4.5 stars almost uniformly
  - Drives base building efficiency

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Voluntary adoption drivers

- Corporate sustainability reporting
  - Drives improvement to attract investors
- Lettability, rental and valuations
  - Linkages to tenant procurement are increasing rentals and lettability for high rated buildings
  - ....which in turn improves valuations

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Scale of impacts

- Investa
  - Average rating increased from 2.3 to 3.99 from 2003-2011
  - 43% reduction in portfolio emissions
- Colonial First State
  - Average rating increased from 2.6 to 4.1 from 2005-2011
- GPT
  - Average rating increased from 2.7 to 4.6 from 2006-2011

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Scale of impacts (base building)

- In 1999 there were:
  - Few 4 star buildings
  - Essentially no rating above 4.5 stars
- In 2012 there were:
  - 856 current ratings
  - 10% were 5 stars
  - 2.5% were 5.5 stars
  - Achieving 5 stars with mid-grade refurbishment of existing buildings becoming common

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Lessons learnt

- Performance ratings can drive real market change
  - Base building/tenant split important for this
- Savings of >40% regularly achieved in conventional buildings
- 5.5 stars achievable with good but not necessarily bleeding edge technology
- Government is an important stakeholder as a market participant
- Base building ratings much easier to drive than tenancy
- A great deal can be achieved with a voluntary rating
- General fairness is more important than absolute accuracy

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Lessons learnt

- Mandatory application is a mixed blessing
  - Rate of adoption – good
  - Politics of scheme management - bad
- No market driver = limited impacts
  - E.g. Tenancy ratings need additional program support
- Temperate climates offer substantial control/tuning opportunities
- Management across multiple jurisdictions can be challenging

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Forward actions

- NABERS Energy for Offices needs an update
  - Benchmarks, methodology out of date
- Potential to create a “Multi tool” to rate combined building types as a single entity
- NABERS Data Centres to be released in 2012
- NABERS being adapted for use in New Zealand

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Conclusions

- A well targeted, well formulated rating can drive major market change
  - Base building/tenant split particularly helpful
- NABERS Energy for Offices has driven major portfolios to reduce emissions by 40%
- NABERS performance now accepted part of renting and valuation matrix for upper grade tenants and buildings
- Voluntary operation helpful to permit flexibility and adaptation in scheme design

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Questions?

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